BETHEL HARBOR, ALASKA
(CWIS NO. 24100)

Condition of Improvement 30 September 1998

AUTHORIZATION: Rivers and Harbors Act, 14 July 1960, under Section 107 (P.L. 86-645) as authorized by the Chief of Engineers on 29 June 1978, provides for a 12 acre small boat harbor and 1,270 foot entrance channel by deepening, widening and straightening a portion of Lousetown Slough.

EXISTING PROJECT:	LENGTH	DEPTH	WIDTH
?? Entrance Channel	1270 ft	-4 ft	31 ft
?? Maneuvering & Turning Channel	418 ft	-4 ft	94 ft
?? Basin (portion of)	519 ft	-4 ft	160 ft

PROJECT USAGE: This project is the only protected harbor in the Kuskokwim River Delta area and provides beach moorage for about 1,200 small boats with the possibility of a future medium-draft mooring basin.

PROGRESS OF WORK:

1982 - Project is approved as amended by the Office of the Chief of Engineers under Section 107 of the 1960 River and Harbor Act, dated 30 July 1982.

1983 - Construction begins on 21 January 1983 and is completed on 20 March 1983.

1988 - Local interests report that the removal of beach mooring fingers from the basin is complete, and a condition survey is conducted.

1991 - Sampling and testing of harbor sediments is conducted.

1992 - Maintenance dredging of the Federal project is carried out while the harbor is frozen in March 1992 with 15,100 cubic yards removed within the Federal limits. A follow up survey in September 1992 reveals that the project is subject to rapid shoaling from the fine sediment prevalent in the vicinity.

1997 - The Federal project is dredged to two feet over project depth; 28,300 cubic yards of material are removed in late winter with land-based equipment and trucked to an upland disposal site.

1998 - The most recent condition survey is conducted from 16 - 19 June.

Continues on page 1-42a.

BETHEL HARBOR, ALASKA (continued)

30 September 1998

COST TO DATE:	New Work	Maintenance	Total
United States Funds	$ 1,514,450	$1,021,062	$ 2,535,512
Contributed Funds	$ 609,110	-0-	$ 609,110
Total Costs	$ 2,123,560	$1,021,062	$ 3,144,622

RANGE OF TIDE:	Mean Range	Diurnal Range	Extreme Range
	2.3'	4.0'	10.0'

CONTROLLING DEPTH: A depth of -4.5 feet MLLW appears to control in the outer entrance channel, June 1998.

MAINTENANCE DREDGING SUPPLEMENT:

A. General

1. The Federal portion of the Bethel small boat harbor was last dredged in April 1997 (a five year interval) while the project was frozen. Present estimates indicate the need for dredging to occur approximately every (5) years.
2. Shoaling hazardous to navigation occurs along most of the entrance channel due to the inability of the material to hold a side slope.
3. The dredging period runs from 15 September to 31 March.
4. The last dredging venture employed the use of a D-8 Caterpillar to rip the ice and frozen material which could then be stockpiled and loaded onto trucks for upland disposal.

B. Sampling & Testing

1. Samples were taken from (3) sites in May 1991 for each portion of the Federal project and showed a physical composition of fines from 86% to 97% with the balance classed as sand. Samples from the primary disposal site consisted of 74% fines and 26% sand, and an alternate disposal site yielded 94% fines and the balance sand.

Continues on page 1-42b.

2. Seven categories were tested for chemical content as outlined with results below:

EPA Method 415.1	Total Organic Carbon	15,100-29,900 ppm (in project)*
EPA Method 413.2	Oil and Grease	45 - 832 ppm (in project)*
EPA Method 418.1	Total Recoverable Petroleum Hydrocarbons	96 - 300 ppm (in project)*
Method 8240 & 8020	Volatile Organic Compounds	none detected (> 0.05 ppm)
EPA Method 8270	Semivolatile Organic Compounds	none detected
EPA Method 8080	Pesticides and PCB's	none detected
Series 6000-7000's	(10) Metals	(6) of (10) detected, all well below management thresholds

* Concentrations in the primary disposal site ranged from 4 to 10 times greater for this category.

C. Disposal

1. Material is pushed out of the project by bulldozer to temporary collection points; from there it is loaded by heavy equipment onto dump trucks and transported to the disposal site.
2. The primary 20 acre site is located NE of the basin with the following geographic corner coordinates: (2A) 60?47'37.93689"N 161?43'45.90448"W, (2B) 60?47'38.87486"N 161?43'45.90241"W, (2C) 60?47'39.49059"N 161?43'51.54268"W, (2D) 60?47'41.90326"N 161?43'51.53736"W, (2E) 60?47'46.82947"N 161?43'56.46355"W, (2F) 60?47'46.82021"N 161?43'38.83232"W, and (2G) 60?47'36.73629"N 161?43'38.85532"W.
3. The current upland disposal site is both preferred and adequate to meet dredging disposal needs.

D. Environmental Permits and Reports

1. The Corps' Environmental Assessment was completed in July 1991, followed by the Finding of No Significant Impact (FONSI) September 1991.

2. The following permits or authorizations are listed by agency below:

Agency Name	Date of Issue	Date of Expiration
ADF&G	17 Sep 91	n/a
ADEC	13 Sep 91	n/a
ADGC	28 Jan 97 *	n/a
DA	28 Feb 97	28 Feb 2007

* States that the project remains consistent with the ACMP and requires no new permits.

3. Water Quality: Four physical parameters were measured at three sampling locations through the water column in May of 1991; temperature, pH, oxidation reduction potential (ORP), and conductivity were measured in the field. No chemical analysis was conducted.